



Managing Construction and Demolition Waste

Solid Waste Management Program technical bulletin

11/2005

This guidance is provided primarily for construction and demolition contractors, construction and demolition waste haulers, roofing contractors, remodeling businesses, homebuilders and homeowners. Cities and counties that issue building permits may also find the information helpful. The guidance covers only those wastes commonly produced during building construction and demolition. You may obtain information about managing other wastes by contacting the sources listed on the last page of this technical bulletin.

Waste types

During building construction and demolition, you may produce one or more of the following types of wastes:

1. Clean fill;
2. Recoverable materials;
3. Regulated construction and demolition waste;
4. Hazardous materials; or
5. Asbestos-containing materials.

Management requirements differ for each of these.

1. Clean fill is "uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinder blocks, brick, minimal amounts of wood and metal and inert (nonreactive) solids . . . for fill, reclamation or other beneficial use" [§260.200(4), RSMo]. Minimal means the smallest amount possible. For example, concrete containing wire mesh or rebar may be used as clean fill. However, exposed rebar should be removed before use. Under no circumstances are roofing shingles, sheet rock, wood waste or other construction and demolition wastes defined as clean fill. Concrete, cinder blocks, bricks or other clean fill materials that are painted with non-heavy metal-based paints are considered clean fill. It is the responsibility of the generator to determine if the paint contains lead or other heavy metals. This determination can be made by representative sampling or by applying historical knowledge of the materials in question. If asphaltic concrete is to be used as clean fill, it is generally recommended that it not be crushed or ground any smaller than necessary. This will help to minimize the leaching of chemicals found within the asphaltic material. Placement of clean fill materials may be subject to requirements of the department's Water Protection Program if it is placed in contact with surface of subsurface waters of the state, or would otherwise violate water quality standards. Contact the department's Water Protection Program at (573) 751-1300 if you have any questions regarding this approval.



2. Recoverable materials are those removed for reuse (lumber, doors, windows, bricks, cinder blocks, ceramic tile and glass) and those removed to be recycled into new products. Potentially recyclable construction and demolition wastes may include scrap metals, asphalt shingles, sheet rock, concrete, lumber, glass and electrical wire. However, it is important to remember that recovered wastes must be used in some way. Separating out certain wastes to be recycled into new products without having a market for them is expensive and pointless. Storing recovered materials indoors is expensive. Storing them outdoors may lower their value, since most will degrade or deteriorate when exposed to the weather. Depending on how they are stored, they may harbor rodents, provide breeding grounds for insects or be a potential fire hazard. Recyclables may not be collected and dumped on the ground while waiting for markets to develop. Therefore, before you deliver recyclable materials to a processing or recovery facility, be sure the facility is legitimate. The Planning Unit of the department's Solid Waste Management Program has information about many recycling facilities in Missouri. You may contact the Planning Unit at (573) 751-5401.

You also need to know that if you plan to remove reusable or recyclable materials from construction and demolition waste, the sorting must take place at the construction or demolition site. The wastes cannot be hauled from the site and dumped for later sorting, except at a permitted processing facility or at a facility that has received a permit exemption from SWMP. Although the Missouri Department of Natural Resources strongly encourages the recovery of potential waste materials whenever possible, these activities must be done legally.

3. Regulated construction and demolition wastes are those that are not used as clean fill and that are not being reused or recycled. Regulated construction and demolition wastes must be disposed of at a permitted landfill or transfer station. They must not be burned. They must not be buried (except at a permitted landfill). They must not be hauled to private or public property and dumped or buried, even with the landowner's permission. If that happens, everyone involved, including the contractor(s), subcontractor(s), the hauler(s) and the landowner can and will be held liable for the illegal disposal (§§260.210, 260.211 and/or 260.212, RSMo). If you are a building contractor, you need to know that burying construction waste from a building anywhere on the property is illegal (§260.210.1, RSMo). See page three for a description of penalties for illegal disposal of construction and demolition waste.
4. Hazardous materials. Although you may find a variety of hazardous materials in old buildings, lead-based paint and asbestos are the most common ones that demolition contractors need to deal with. Asbestos is discussed in the next section of this document. Guidance for handling demolition waste containing lead-based paint or other heavy metals (such as cadmium or chromium) is available by calling the department's Environmental Assistance office at 1-800-361-4827.

If any painted items are found to contain lead or other heavy metals, a hazardous waste | determination must be made before disposal. If the paint waste is found to be hazardous, it must be managed as a hazardous waste. More information on this subject is available from the department's Hazardous Waste Program at (573) 751-3176.

If the waste paint residue is nonhazardous, it may be disposed of at a sanitary landfill. The landfill may require you to complete a special waste disposal request form, and provide the results of testing on the paint waste to show that it is not hazardous prior to accepting the waste.

5. Asbestos. Before planning a demolition project, bidding a project, letting a bid or beginning the demolition, it is important to know if the building has any asbestos-containing materials (ACM) and who is responsible for removing them. Older buildings may contain asbestos in ceiling or floor tile, as insulation or soundproofing on ceilings, pipes, ductwork or boilers, or on the outside as transite siding or in shingles. The presence of ACM cannot be confirmed just by looking. A thorough inspection of the building by a Missouri certified asbestos inspector must be done to determine the presence and condition of ACM. Because some ACM may be hazardous to unqualified persons doing removal work and to the public, state and federal law require most ACM to be removed by registered asbestos abatement contractors. However, there are a few exceptions. Contact the department's Air Pollution Control Program's Asbestos Unit at (573) 751-4817 for more specific information about managing ACM. If the ACM is to go to a landfill or transfer station, contact the facility in advance to see if they accept ACM and if they have any special handling or packaging requirements.

Penalties for illegal disposal of construction and demolition wastes

The Missouri Solid Waste Management Law provides for civil penalties for persons who dispose of or allow the disposal of regulated construction and demolition wastes in unpermitted areas. The law also contains criminal provisions for some types of illegal construction and demolition waste disposal.

1. Civil Penalties: Any person who disposes of construction and demolition waste or allows the disposal of construction and demolition waste in an area not permitted for such disposal may be assessed a civil penalty of up to \$1,000 per day per violation (§260.210, RSMo).
2. Criminal Penalties: Any person who purposely or knowingly disposes of or causes the disposal of regulated quantities of construction and demolition waste or other solid waste may be prosecuted for violating the criminal provisions of §§260.211 and 260.212, RSMo. Convictions may include fines of \$20,000 or more, community service, and/or clean up of the illegally dumped waste. In some cases, persons convicted of illegal dumping have served time in jail.

The Missouri Air Conservation Law and regulations provide for civil penalties of up to \$10,000 per day per violation for persons who violate the requirements for handling, packaging, transporting or disposing of ACM. The federal Clean Air Act also contains civil and criminal penalties for violations. The same penalties apply for persons who illegally dispose of construction and demolition waste by burning.

Other requirements

Other legal requirements related to managing construction and demolition wastes include:

1. Anyone engaged in building construction, modification or demolition must maintain a record of all sites used for construction and demolition waste disposal for one year. The records must be made available to department staff upon request (§260.210.6, RSMo).
2. Cities and counties that issue building permits are required to notify each permittee, in writing, of the legal requirements for construction and demolition waste disposal (§260.210.7, RSMo).
3. A person shall be guilty of conspiracy . . . if he knows or should have known that his agent or

employee has violated the civil or criminal provisions of the law related to illegal disposal of construction and demolition waste or other solid waste (§260.212.9, RSMo).

4. Anyone selling, conveying or transferring property that contains construction and demolition waste or other solid waste (whether buried or not), must disclose the existence and location of the waste disposal site to a potential buyer early in the negotiation process (§260.213, RSMo).
5. Anyone hauling materials that could fall or blow off a vehicle, including construction and demolition waste, must cover the load or secure it so that none of it can become dislodged and fall from the vehicle (§307.010, RSMo). Also, many landfills and transfer stations in Missouri require all incoming loads to be covered. Some facilities accept open loads, but may charge you extra for them.
6. A person commits the crime of littering if they throw or place, or cause to be thrown or placed, any garbage, trash, refuse or rubbish of any kind on the right-of-way of any public road or highway, in or on any waters of the state or the stream banks, and on any public or private property (§577.070, RSMo).

Additional information

You may obtain additional information about properly managing construction and demolition wastes from the sources listed below.

Air Pollution Control Program	(573) 751-4817
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Hazardous Waste Program	(573) 751-3176
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Regional Offices

Kansas City Regional Office	(816) 622-7000
Northeast Regional Office (Macon)	(660) 385-2129
St. Louis Regional Office	(314) 416-2960
Southeast Regional Office (Poplar Bluff)	(573) 840-9750
Southwest Regional Office (Springfield)	(417) 891-4300

Solid Waste Management Program	(573) 751-5401
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Water Protection Program	(573) 751-1300
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Environmental publications are also available at www.dnr.mo.gov/pubs/pubs.htm.